

**Remarks/Arguments:**

Claims 1 through 15 remain pending in this application. Claims 7, 8, 10, 11, and 12 have been amended to correct the antecedent basis objections.

The non-final Office Action rejected claims 6, 7, 10, 11, 14, and 15 under 35 U.S.C. § 102(b) as being anticipated by Brockelsby et al., U.S. Patent No. 5,192,954 ("Brockelsby"). Applicant respectfully contends that Brockelsby does not anticipate claim 6, 7, 10, 11, 14, or 15.

The present invention discloses a radio communications system having an intrinsic pavement transmitter and antenna. Applicant's reference to intrinsic indicates that, as disclosed and claimed by Applicant, the transmitter and antenna are within the pavement. That is, the radio frequency signals between the transmitter and antenna are conducted through the conductive paving materials. As specifically claimed, both a first transmitter/receiver and a second transmitter/receiver are located at stationary points along the intrinsic pavement transmitter and antenna. The roadway paving material is the conductor and transmitter of the radio frequency signals between the first transmitter/receiver and the second transmitter/receiver.

The present invention claim 6 intrinsic pavement transmitter and antenna specifically teaches a roadway including a suitable wearing course material (for example asphalt or concrete), and an effective amount of radio frequency conductive material to transmit and receive radio frequency signals.

The Office Action notes that Brockelsby discloses an *intrinsic* pavement transmitter and antenna. However, Brockelsby only discloses "antennas for electromagnetic communication between stationary locations along a roadway and vehicles traveling along the roadway equipped with transponders carrying information relating to the vehicle." Brockelsby, col. 1, lines 34 through 38. The transponder or transmitter of radio frequency signals in Brockelsby is limited to moving vehicles. The transponder is not intrinsic to the pavement. Indeed, there is no disclosure, suggestion or motivation in Brockelsby to have the transponder stationary and placed anywhere within the roadway or pavement. Applicant further notes that a specific object of Brockelsby is to "provide road mounted antennae suitable for capturing transponders carried by vehicles occupying reduced portions of a standard highway lane." Brockelsby, col. 2, lines 3 through 5.

Accordingly, because Brockelsby provides no suggestion for an intrinsic pavement transmitter and antenna in which both the antenna and the transponder are stationary and located at points along the pavement, Applicant respectfully contends that Brockelsby does not anticipate or render obvious the pending claims as amended, and accordingly requests withdrawal of the noted rejection based upon Brockelsby.

The Office Action also rejected claims 1 through 5 under 35 U.S.C. § 103(a) as being rendered obvious by Brockelsby in view of Der Ghazarian et al., U.S. Patent Application No. 2002/0128769 ("Der Ghazarian"). As argued above, Brockelsby does not disclose, show or suggest in any manner the claimed necessary elements of the pending invention. More specifically, the present invention is directed to and claims a radio communication's system having an intrinsic pavement transmitter and antenna, and a first and second transmitter/receiver at a respective first and second point along the intrinsic pavement transmitter and antenna, where both of the first and second transmitter/receiver are in communication with an end-user. As noted above, Brockelsby does not disclose or suggest a transponder (or transmitter) that is stationary and located along the roadway. The Office Action acknowledges that Brockelsby does not disclose that the first and second transmitter/receivers are in communication with an end-user, as claimed in the present invention.

While Der Ghazarian may disclose a system in which communication occurs between a receiver, transceiver and an end-user, Der Ghazarian does not disclose or suggest in any way that a transmitter and receiver are located along or within (intrinsic) to the roadway pavement. Accordingly, Applicant respectfully contends that Brockelsby in view of Der Ghazarian do not render obvious the pending claims as amended, and accordingly requests withdrawal of the noted rejection based upon Brockelsby further in view of Der Ghazarian.

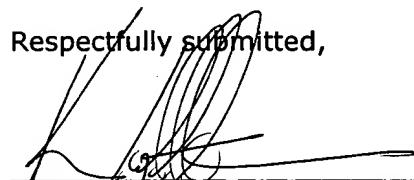
The Office Action also rejected claims 8, 12, and 13 under 35 U.S.C. § 103(a) as being rendered obvious by Brockelsby in view of Freeman et al., U.S. Patent No. 3,962,142 ("Freeman"). As argued above, Brockelsby does not disclose, show or suggest in any manner necessary elements of the pending invention. The Office Action notes further that Brockelsby does not disclose the elements and limitations of claims 8, 12, and 13 in which the conductive carbon is from the group of carbon black, carbon fiber, graphite and coke breeze; the suitable wearing course material is from the group of asphalt and concrete; and the conductive material is intermixed with the wearing course material.

While Freeman may disclose electrically conducting concrete, Freeman does not disclose or suggest having a transmitter and receiver that are located along or within the roadway pavement or concrete. Accordingly, Applicant respectfully contends that Brockelsby in view of Freeman does not render obvious the pending claims as amended, and accordingly requests withdrawal of the noted rejection based upon Brockelsby in view of Freeman.

The Office Action finally rejected claim 9 under 35 U.S.C. § 103(a) as being rendered obvious by Brockelsby in view of Strassman, U.S. Patent No. 5,460,649 ("Strassman"). As argued above, Brockelsby does not disclose, show or suggest in any manner the necessary elements of the pending invention. Specifically with respect to claim 9, and as noted in the Office Action, Brockelsby does not disclose a transmitter and receiver positioned along or within the conductive roadway pavement. Strassman may disclose a fiber-reinforced rubber asphalt composition, however, Strassman does not supplement the limited disclosures of Brockelsby in that Strassman similarly does not show any transmitter and receiver used in conjunction with and positioned along or in the roadway pavement. As such, Brockelsby in view of Strassman do not render obvious claim 9 of the present invention.

Applicant contends that with the noted amendments, this application is now in a condition for allowance. Applicant respectfully requests early consideration and allowance of this application as amended.

Respectfully submitted,

  
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